UNITED
NATIONS

TD

United Nations Conference
on Trade and Development

Distr.
GENERAL

TD/B/CN.1/IRON ORE/14
1 August 1994

Original: ENGLISH

TRADE AND DEVELOPMENT BOARD
Standing Committee on Commodities
Intergovernmental Group of Experts
on Iron Ore
Third session
Geneva, 24 October 1994
Item 4 of the provisional agenda

ANNOTATED BIBLIOGRAPHY ON IRON ORE - 1994

Prepared by the UNCTAD secretariat

GE.94-53149

CONTENTS

		Paragraphs
Introduction		1 - 2
PART I.	RELEVANT ACTIVITIES AND STUDIES OF INTERNATIONAL ORGANIZATIONS	
1.	UNCAD	
1.1	Commodities Division	3 - 10
1.2	Division for Data Management	11 - 14
1.3	Services Division: Shipping	15 - 20
2.	OTHER UNITED NATIONS ORGANIZATIONS OR SPECIALIZED AGENCIES	
2.1	Economic Commission for Africa (ECA) . . .	21 - 24
2.2	Economic Commission for Europe (ECE)	25 - 32
2.3	Economic Commission for Latin America and Caribbean (ECLAC)	33
2.4	Economic and Social Commission for Asia and the Pacific (ESCAP)	34
2.5	Economic Commission for West Asia (ESCWA) .	35 - 37
2.6	United Nations Division of Natural Resources and Energy, New York	38
2.7	United Nations Environment Programme (UNEP)	39 - 40
2.8	United Nations Development Programme (UNDP)	41
2.9	United Nations Industrial Development Organization (UNIDO)	42 - 43
2.10	International Trade Center UNCTAD/GATT (ITC)	44
2.11	International Labour Organization (ILO)	45 - 46
3.	OTHER INTERNATIONAL ORGANIZATIONS	
3.1	World Bank	47 - 49
3.2	General Agreement on Tariffs and Trade (GATT)	50
3.3	Organization for Economic Co-operation and Development (OECD)	51 - 53

3.4 Commission of the European Union (CEU) . . 54 - 57

3.5 Common Fund for Commodities (CFC) . . . . . 58 - 59

3.6 International Iron and Steel Institute (IISI) . . . . . 60 - 61

3.7 Latin American Iron and Steel Institute (ILAFA) . . . . . 62 - 64

3.8 South-East Asia Iron and Steel Institute (SEASI) . . . . . 65 - 69

3.9 Arab Iron and Steel Union (AISU) 70

3.10 Arab Industrial Development and Mining Organization (AIDMO) 71

3.11 African Iron and Steel Association (AISA) 72

3.12 American Iron Ore Association (AIOA) . . . 73

PART II. RELEVANT STUDIES AND PUBLICATIONS COMMUNICATED BY GOVERNMENTS

Brunei Darussalam 74

Egypt 75

Gabon 76

Indonesia 77

Mali 78

Malawi 79

Sudan 80

United States . . . . . 81 - 82

Venezuela 83

PART III. SUMMARIES ON SPECIFIC TOPICS

A. Iron ore mining capacity and investments 84 - 85

B. Mining and environment 86

Annex

Directory of relevant international organizations

INTRODUCTION

1. Since 1989, in response to the request made by the Intergovernmental Group of Experts on Iron Ore, the UNCTAD secretariat has prepared an annual version of the "Annotated bibliography on iron ore", with a view to providing information on current worldwide activities and publications on iron ore and related matters.

2. For the preparation of the 1994 version of this bibliography, all States members of UNCTAD as well as the international organizations concerned, were requested to provide copies of recent studies and any other relevant information on iron ore, iron and steel. The information provided herewith is based on the replies received as of 15 July 1994, and complemented with information and studies available in the UNCTAD secretariat on iron ore and steel issues. It focuses on studies and activities carried out during 1993 and the first half of 1994.

Part I

RELEVANT ACTIVITIES AND STUDIES OF INTERNATIONAL ORGANIZATIONS

1. UNCTAD

1.1 Commodities Division

3. In fulfilling its main role of strengthening international co-operation on commodities, UNCTAD's main activities in the field of ferrous minerals and metals have been linked to the work of the **Intergovernmental Group of Experts on Iron Ore (IGEIO)**. The IGEIO is a forum set-up within UNCTAD which provides for a regular producer-consumer dialogue on iron ore matters. Since 1986, the Expert Group has been active in improving market transparency, reviewing and monitoring the market situation and outlook for iron ore, and facilitating closer co-operation through regular exchanges of views and information on issues of concern to the iron ore industry worldwide. Functioning as the only study-group type of forum exclusively devoted to iron ore, the IGEIO has been attracting at its annual sessions experts who are policy-makers in government and industry from about forty countries representing producers, consumers, traders, and relevant international organizations. Participation in the IGEIO'sessions is open to representatives from all UNCTAD member countries and the participation of industry is highly encouraged. The annual sessions of the Expert Group are held for three days, normally in October at the Palais des Nation in Geneva.

1.1.1 Review of the current market situation and outlook for iron ore - 1994
TD/B/CN.1/IRON ORE/13, Geneva, July 1994
For general distribution. Issued in the six United Nations official languages (Arabic, Chinese, English, French, Russian and Spanish).

4. This report describes world iron ore market developments which took place in 1993 and the first half of 1994. It is mainly intended as a background

document to stimulate the annual discussions among iron ore producers and consumers involved in the work of UNCTAD's Intergovernmental Group of Experts on Iron Ore. Featured are recent developments influencing demand for iron ore such as the world iron and steel production, the ferrous metallics market and iron ore stock movements. The supply capacity at the regional and global levels, as well as the financing and investments plans of the iron ore mining industry, are also dealt with. The report examines international trade issues relating to the volume and value of international trade, prices, freight rates and transportation costs for iron ore. Technological and environmental issues are also addressed, as well as the short-term outlook for the iron ore market.

1.1.2 Annotated bibliography on iron ore - 1994
TD/B/CN.1/IRON ORE/14, Geneva, July 1994
For general distribution, in all United Nations official languages.

5. The present bibliography has been issued annually since 1989 for submission to the annual sessions of the UNCTAD's Intergovernmental Group of Experts on Iron Ore. Its main purpose is to share information among the iron ore community as regards relevant studies and activities currently undertaken worldwide by international institutions and in individual countries on iron ore issues. It provides summaries of major technical and economic conclusions of specific studies and activities in the field of iron ore. A directory containing the addresses of relevant organizations is also included, with a view to facilitating the acquisition or further details concerning the publications and/or events listed.

1.1.3 Enhanced recuperation and recycling: implications for primary commodity producers in developing countries - the case of ferrous scrap versus iron ore
UNCTAD/COM/43, Geneva, June 1994
For general distribution, in English only.

6. This paper briefly reviews the opportunities and constraints arising from enhanced global recuperation and recycling of materials for commodity-producing developing countries. Recognizing that the problem of scrap quality is not solved, it concludes that iron ore producers and exporters would only have to reckon with a worsening of the present situation if (a) environmental regulations and, in particular, the internalization of environmental externalities and resources values were to change: (b) significant progress in upgrading of ferrous scrap quality were to be made, and (c) the current relative prices of iron ore and scrap were to change.

1.1.4 Structural changes in the world minerals industry during the 1980s
UNCTAD/COM/25, Geneva, February 1994
For general distribution, in English only

7. This study reviews and analyses the structural changes in the international non-fuel minerals industry, focusing on important trends during the period 1975-1989, concentrating on the supply side. It covers the mineral industries of major economic importance, including iron ore. The analysis focus on the recent changes in corporate structure of mineral producing companies, concluding that the corporate concentration in the minerals industries is still high and there are no signs that it will decrease during the next decade. However, a continuing and possibly accelerated privatization of mining companies in developing countries

will further diminish national government control over the use of the natural resources regardless of who takes over the state share of equity.

1.1.5 The future of mining countries: new strategies or the restructuring of the state? - UNCTAD/COM/29, Geneva, February 1994
For general distribution, in English only

8. The paper examines the role of the State in major mining countries and questions whether the State structures resulting from the political economy of rent in the mining developing countries are compatible with the development of capitalist enterprises. Based on the effect of mineral rents on macroeconomic parameters, the analysis suggests that the competitiveness of mining operations depends on the capacity of the State to separate the logic of mining production from regional social constraints or from a clientilist redistribution of the rent.

1.1.6 The mineral sector in Peru
UNCTAD/COM/28, Geneva, December 1994
For general distribution, in English only

9. This country case study was prepared under a project on the role of the mineral sector in the development process of developing countries (MINDEV). It examines both the general economic environment and government policies pertaining exclusively to the mineral sector. It is intended to identify those policies and instruments which are most likely to enhance the contribution of the non-fuel mineral sector to economic development and promote a broader-based and eventually self-sustaining process of development. A similar study was already published for Indonesia, and other case studies for Dominican Republic, Morocco, Zimbabwe and Australia/Chile/Srilanka are expected to be published in the near future.

1.1.7 Mineral resources and sustainable development
TD/B/CN.1/16, Geneva, September 1993
For general distribution, in all United Nations official languages

10. This report considers the major policy areas which mineral economies, especially non-fuel mineral economies, need to address at the national level in order to foster a process of sustainable development. The report points out that sustainability includes not only environmental components, but also economic, social and even political ones, and the sustainability of development based on the exploitation of mineral resources is often linked primarily to the issue of the depletion of those resources, as well as to the potentially environmentally damaging effects of their exploitation. Nevertheless, in order to make a positive contribution to sustainable development, it is essential that depleting mineral assets be used to generate new wealth which, in the form of useful lasting capital, can benefit present and future generations.

1.2 Division for Data Management

1.2.1 Iron ore statistics 1986-1993
TD/B/CN.1/IRON ORE/12, Geneva, July 1994
For general distribution in all United Nations official languages.

11. This compendium is issued under the UNCTAD regular statistical programme on minerals and metals. This publication has appeared annually since 1984, and provides detailed iron ore statistics to complement the annual market review. The world statistical series cover the last 8 years and is based on the replies received from governments to the UNCTAD annual questionnaire on iron ore. It has 27 tables and includes data for production, consumption and trade of iron ore and ferrous metallics, as well as crude steel production.

1.2.2 Trust fund project on iron ore information.

12. Following the suspension of activities of the Association of Iron Ore Exporting Countries (APEF) as of 1 June 1989, the Governments of certain countries decided to establish a trust fund project on iron ore information administrated by UNCTAD. The purpose was to continue the collection and dissemination of data relating to iron ore mostly based on industry sources, formerly undertaken by APEF. This project is currently financed by voluntary contributions from the governments of Australia, Canada, India, Japan, United States and Venezuela, and by the revenues from the sales of publications. The donor Governments will decide about the future of this project by February 1995. The following publications were issued under this project:

- Iron Ore Statistics
  This is a tri-lingual publication (English, French and Spanish), issued bi-annually in July and October since 1989.

- Market Report on Iron Ore
  Published in English only, issued annually in March since 1990.

1.2.3 Monthly Commodity Price Bulletin
Annual subscription 03600P - (ISSN 0251-6438)

13. This bulletin is issued monthly, and is available for annual subscription which also covers the occasional publication of a supplement. The explanatory notes, descriptions and sources are published in English, French and Spanish. The bulletin contains historical series of monthly, quarterly and annual average prices for the current and past three years for all major commodities including minerals, ores and metals, of which iron ore.

1.2.4 UNCTAD Commodity Yearbook - 1993
TD/B/CN.1/STAT/1, Sales No. E/F.93.II.D.8, Geneva, 1993
Bi-lingual publication : English/French

14. This annual publication is intended to provide desegregated data at the world, regional and country levels for trade and consumption in selected agricultural primary commodities and minerals, ores and metals including iron ore. Basic tables are presented from both the commodity and the country point of view, to serve as background material to international commodity discussions and negotiations in UNCTAD, as well as to be of practical use to governments, international organizations, universities and other research institutions with an interest in international commodity policy issues.

1.3 Services Division : Shipping

15. In 1992 the UNCTAD's Standing Committee on Developing Services Sectors was established, with a view to fostering competitive services sectors in developing countries. Shipping remains a priority area. A number of activities including specialized reports, technical assistance projects and training programmes, in the fields of shipping, ports, maritime legislation and multimodal transport continue to be carried out, and certainly are of interest to those involved in the seaborne trade of iron ore. A selection of the most recent publications includes:

1.3.1 Review of maritime transport 1992
TD/B/CN.4/27, Sales No. E.94.II. D2, Geneva, 1993
Available in all six official languages.

16. This annual report identifies the main developments in world maritime transport, providing relevant analytical and statistical data. It examines major changes in the world fleet, shipbuilding, freight markets, and multimodal transport. It includes an overview of the demand for global shipping services and developments in international seaborne trade. Emphasis is given to the development of the merchant marines in developing countries as compared with other groups of countries. The report also highlights the continued disparity between developing country cargo generation and fleet ownership.

1.3.2 Sustainable development for ports
UNCTAD/SDD/PORT/1, Geneva 1993
Available in English and French

17. This report makes a comparative analysis of the port sector and related policies in different countries, with a view to determining the factors which can contribute to better management, efficiency and sustainable development of ports and related services. It examines the risks of environment deterioration to the sea, land and air in most ports, resulting from possible accidents occurring in the port area, or even from the day-to-day port operations. It provides guidelines on strategies aiming to achieve both efficient performance and sustainable development of the marine and coastal environment and its resources.

1.3.3 Review of activities in the fields of shipping, ports, maritime legislation and multimodal transport - TD/B/CN.4/36, Geneva. 1994
Issued in all six official languages.

18. This report briefly reviews the activities undertaken by UNCTAD since November 1992, to promote international consensus and to bring fresh thinking to bear on long-standing shipping problems. It also presents an overview of the work carried out on human resources development and technical cooperation in the shipping area. The report stresses the need for a comprehensive approach to liberalization, including the formulation of competition policies to ensure that potential benefits from policy reforms are not eroded by possible monopolistic practices of carriers.

1.3.4 Cooperation among developing countries in the field of shipping, ports and multimodal transport - UNCTAD/SDD/SHIP/1, Geneva, 1994
Available in English, French and Spanish

19. Aiming at enhancing cooperation and stimulating the development of the maritime transport sector in developing countries and countries in transition, this report reviews the experience in implementing cooperative solutions to shipping problems, which could possibly also serve as a guide to other organizations in their search for enhanced effectiveness. It focusses on cooperative arrangements already in place in Africa and Latin America.

1.3.5 Progressive liberalization and the development of shipping services in developing countries - TD/B/CN.4/34, Geneva, 1994

20. This report outlines the reasons for widespread protectionism and controls prior to the 1980s, and the motivation for shipping policy reforms, including liberalization, in the 1980s and 1990s. It gives selected examples of shipping policy reforms in developing countries and examines their possible consequences. Finally, it describes constraints faced by service suppliers of developing countries in providing competitive shipping services.

2. OTHER UNITED NATIONS ORGANIZATIONS OR SPECIALIZED AGENCIES

2.1 Economic Commission for Africa (ECA)

21. During the period 1993-1994, the UNECA carried out two main studies in the field of development of the iron and steel industry. Both were included in the UNECA annual publication "Focus on African Industry", Volume V, No. 2, published in 1993, which reviews in nine articles the internal and external factors which aggravated the socio-economic conditions in most African countries, and argues why Africa has failed to industrialize and how it can go about initiating some process of industrial growth in the 1990s and beyond.

2.1.1 Survey on the development of Africa's iron and steel industry and perspectives for the year 2000

22. This report analyses the evolution of the African iron and steel industry from the 1950s until today, noting that in the 1980s significant developments were achieved; three new steel integrated complexes based on modern direct reduction/ electric arc furnace route were established, and steel production in Africa doubled. The study lists all existing integrated iron and steel plants, mini-plants and re-rolling mills in operation in Africa. It also analyses the potential for the development of the iron and steel sector in the region based on the existing natural resources including iron and alloying metal ores, fuels, reductants, energy, water and additives. It also reviews the ongoing and planned projects for African steel capacity by the end of the century.

2.1.2 Application of compact mini-plant technology for the manufacture of steel products

23. This article focusses on the fundamental differences between the mini-mills and the integrated plants in steel manufacturing, comparing the economical and

technical aspects of both processes, and examining the relevance of mini-mills for the development of the iron and steel industry in Africa. It is felt that, the mini-mill offers good opportunities because it can be installed economically for small markets, the technology used is modular and easily transferable, and it combines flexibility, convenience and adaptability to changing market conditions. The report concludes that mini-mills should be used in the African context, particularly for the production of building materials for the construction industry.

2.1.3 Report to the Eleventh Meeting of the Conference of African Ministers of Industry on Problems, Policies, Issues and Prospects by the year 2000 of Africa's basic industries - CAMI.11/4 - ICE/1993/8, 1993

24 - This study discusses the problems, policies, issues and prospects by the year 2000 of Africa's basic industries within the context of the implementation of the Programme of the Second Industrial Development Decade for Africa (1991-2000). It assesses the present status and prospects for the development of basic industries in the region in order to help policy-makers to undertake correct practical measures for implementing their industrial programmes. It covers the chemical, metallurgical and engineering industries, which contain a part on metal ore and iron and steel industry.

2.2 Economic Commission for Europe (ECE)

25. The United Nations Economic Commission for Europe organizes annual meetings, seminars, study tours and undertakes studies in the field of iron and steel, as part of the activities of its Working Party on Steel. Its main studies and activities in 1993 and 1994 were:

2.2.1 The steel market in 1992
ECE/STEEL/81, Sales No. E/F/R.93.II.E.30, Geneva, 1993.
Available in English, French and Russian.

26. This publication covers steel developments in 1992. It presents a review of the steel market and the main factors affecting the supply of and demand for steel products in Eastern and Western Europe, North and South America, Japan, Australia, China and the emerging steel-producing countries of the Middle and Far East. It describes past developments and prospects regarding main macroeconomic trends, main steel-consuming sectors, steel trade and the main raw materials such as iron ore, scrap, coal, etc. The 1993 edition of this study is scheduled to be published in July 1994.

2.2.2 Impact of developments in scrap reclamation and preparation on the world steel industry ECE/STEEL/84, Sales No. E/F/R.92.II.E.28, Geneva, 1993
Available in English, French and Russian

27. The study, based on national monographs and material received from specialized institutes and organizations, presents the current situation and the major trends in the evolution of scrap utilization and consumption by the steel industry. It reviews the supply of ferrous raw materials to the steel industry and the changes in the world steel industry's energy needs with the growing use of scrap. It also examines the impact of the growing use of scrap on steelmaking

costs, on the environment and on the production of various types and grades of steel in western and eastern Europe and in the developing countries.

2.2.3 Iron and steel scrap: its significance on further developments in the iron and steel industries ECE/STEEL/74, Sales No. E/F/R.92.II.E.37, Geneva,1991 Available in English, French and Russian.

28. This study is based on material specifically collected from countries through questionnaires distributed every two years. The study covers the main consumers of western, central and eastern Europe, the former USSR, North and South America and Japan. It deals with the main developments in the consumption of the primary steelmaking metals (scrap, pig iron and direct-reduced iron); trends in scrap availability; scrap preparation and quality; and draws conclusions concerning trends in scrap resources. Basic development in scrap use by process and country are presented, along with an analysis of scrap trade. Total scrap balances by country are given, in addition to outlooks and future trends for scrap resources and use. The study is complemented by 91 tables supporting the text. The ECE Working Party on Steel has started the update of this publication which will be published in October 1995.

2.2.4 Other ECE activities

29. Pursuant to the recommendations of the Seminar on Metallurgy and Ecology held in Nancy (France) in 1993, the first Meeting of experts on the Steel Industry and the Environment took place at Geneva on 29 March 1994. Its main objective was to define priority areas for practical and concrete solutions to environmental problems in the steel industry, and make recommendations on how the Working Party should concentrate its efforts and resources in this field.

30. A Conference on the Steel Industry in Europe was organized in Cracow (Poland) from 25 to 26 April 1994 jointly with the World Bank, EBRD, the European Union and the International Iron and Steel Institute, to discuss the results of a study prepared by a consulting firm on the basis of data already available or communicated directly by participating countries. This project was the first attempt to gather at the regional level information known to separate countries or organizations. It allowed the consideration of the restructuring of the steel industry in Europe as a region. The Conference gathered some 150 participants.

31. At the invitation of the Government of Japan, the UNECE jointly with the Japan Iron and Steel Federation organized a study tour of the Japanese iron and steel industry. The study tour took place from 23 to 29 May and included visits to six steel-making or processing facilities in the Tokyo region.

32. In April 1995, the ECE Working Party on Steel will organize a Seminar on "The steel industry and recycling", in Dusseldorf, Germany.

2.3 Economic Commission for Latin America and the Caribbean (ECLAC)

33. During the 1993-94 period, ECLAC had not carried out any study on iron ore or related matters. Nevertheless, ECLAC maintains close collaboration with ILAFA (Latin American Iron and Steel Institute) whose headquarters are located in Santiago, Chile, with a view to following regional developments in this field.

2.4 Economic and Social Commission for Asia and the Pacific (ESCAP)

34. Although ESCAP has not recently conducted any specific studies or activities on iron ore, it has implemented, with the financial support of UNDP, a regional technical assistance programme aimed at revitalizing the mineral sector of developing countries in the Asia-Pacific region through the conduct of studies, organization of training workshops and the development of national mineral data bases. Issues relating to iron ore are, to some extent, also covered in these activities. The outputs of these activities are presented in a series of 8 publications listed below, providing useful reference material to government officials, business community and earth scientists throughout the region.

- Minerals and Metals Trade in the Asia-Pacific Region;
- Minerals Industry Taxation Policies for Asia and the Pacific;
- Mineral Investment Conditions in Selected Countries of the Asia-Pacific Region;
- The Contribution of Transnational Mining Corporations to the Asia-Pacific Region;
- ESCAP Minerals Database System;
- Mineral Resources Development and the Environment;
- Minerals and Metals Trading; and
- Negotiating Mineral Industry Agreements and Contracts.

2.5 United Nations Economic and Social Commission for Western Asia (ESCWA)

35. The ESCWA has not published any studies or reports on iron ore or relevant to iron and steel industry during 1993/94. However, ESCWA Regional Advisors on Industry and Science & Technology provide technical and advisory assistance to develop the existing industries in the region, including the iron and steel industry in the member states. ESCWA has published the following two studies in 1987 in cooperation with the Arab Industrial and Mining Organization and the United Nations Industrial Development Organization.

2.5.1 The iron and steel industry in the ESCWA Region (E/ESCWA/ID/87/10), issued in Arabic in July 1987

36. This study gives a review and analysis of past developments, present situation, basic problems and future trends and prospects for the development of the iron and steel industry in the following countries of Western Asia: Arab Gulf States, Syria, Jordan, Lebanon, Egypt, and Republic of Yemen.

2.5.2 Development of iron and steel industry - Framework for development of technology in iron and steel industry in the Arab countries E/ESCWA/ID/87/61 issued in 1987 in Arabic

37. The objectives of this study were to make an assessment and analysis of technological capabilities presently available in the iron and steel industry in Arab countries, and in the light of the future prospects of technological capabilities in the industrially advanced countries, to promote a necessary framework for the development of technological capabilities on iron and steel in the Arab countries.

2.6 United Nations Division of Natural Resources and Energy, New York

38. No specific publication on iron ore or related matters was prepared by this Division in 1993. The second session of the United Nations Committee on Natural Resources was held in New York in February 1994. The session reviewed the activities of the United Nations system in the field of water and mineral resources at the time when decisions regarding the decentralization and consolidation of UN global mandates for water and minerals were being finalized. Issues related to economic and social development needs in the mineral sector, and the effects of environmental protection and conservation policies on the mineral sector were also addressed.

2.7 United Nations Environment Programme - (UNEP)

39. UNEP's Industry and Environmental Programme Activity Center (IE/PAC) was established in 1975 in Paris to bring industry, governments and non-governmental organizations together to work towards environmentally sound forms of industrial development. To achieve this goal, UNEP/IE/PAC provides access to practical information and develops cooperative actions. To promote transfer of information and sharing of experiences, it has developed various activities such as the preparation of technical reviews and guidelines, training activities, query response service, computerized clearinghouse etc. High priority has been accorded to the iron and steel industry. Past publications from the IE/PAC covering the environmental aspects of the steel industry issued until June 1993 have been mentioned in the 1993 version of this bibliography.

40. Recently, IE/PAC reached an accord with the International Iron and Steel Institute to undertake a joint project to comprehensively update the UNEP's technical report on the environmental aspects of the iron and steel industry. This work started in 1993 and is expected to be finalized in 1995. The Center is also currently setting up an in-house database on countries' environmental standards and guidelines for industrial discharges. Since the collected information will also be published as sectorial monographs, the draft volume covering the iron and steel sector will be shortly distributed to relevant experts worldwide for comments.

2.8 United Nations Development Programme (UNDP)

41. UNDP has not issued any particular publication on iron ore mining or in the iron and steel field in 1993. However, UNDP continues to finance several projects related to the development of iron ore mining and the iron and steel industry in a number of developing countries, as well as in the countries in transition of Eastern Europe.

2.9 United Nations Industrial Development Organization (UNIDO)

42. No studies or activities dealing specifically with iron ore were undertaken by UNIDO in 1993. However, UNIDO is presently preparing a Sectoral Survey of the global iron and steel industry, with emphasis on the iron and steel industry in developing countries, which will deal with current trends and issues. The survey will consist of 10 chapters and a statistical appendix. A part devoted to the major trends in consumption, production and international trade will be followed

by a topic-oriented part focused on technology, environment, government intervention, business strategies and international competitiveness.

43. UNIDO's assistance to the metallurgical industries covers the development and strengthening of non-ferrous metals and iron and steel industries, and special consideration has been given to the requirements in Central and Eastern Europe and the CIS countries. Traditional activities relate to the elaboration and adaptation of technologies for processing of locally available metallurgical minerals or ores; assistance in the establishment, management and operation of new plants at all scales; provision of expertise for rehabilitation, restructuring, modernization and efficient operation of existing plants; application of appropriate technologies and equipment, including technological consulting, product development, and introduction of managed and computerized systems; improvement of product-mix, harmonized to the national, regional and international demand; consulting on management and cost accounting of metallurgical and metal transformation plants; and energy conservation and environmental considerations.

2.10 International Trade Center UNCTAD/GATT (ITC)

44. ITC's present programs do not include any specific activity related to iron ore.

2.11 International Labour Office (ILO)

45. Following the reports prepared for the twelfth session of the ILO's Iron and Steel Committee held in April 1992 in Geneva, and other publications already reported in the previous issues of this bibliography. ILO has in 1993 produced, within its Sectoral Activities Programme, the study described below. In addition, the ILO programme and budget for 1994-95 contains provisions for multi-sectoral studies on the privatization of basic industries and on best environmental practices adopted by governments, employers and workers in industrial activities. Both studies include the iron and steel industry.

2.11.1 An industry steels itself for change: restructuring the iron and steel industry in Eastern Europe, Doc. SAP 2.32/WP.56, Geneva, 1993

46. The study examines recent steel consumption and production trends in Central and Eastern European countries and the Commonwealth of Independent States as well as employment effects of profound economic and structural transformations towards a market economy system in the steel industry, environmental situation, privatization of steel enterprises, etc. It points out that the steel restructuring programmes of those countries should not be focused solely on the modernization of production facilities, but should also contain a comprehensive system of social support measures to assist new market-oriented strategies and alleviate the social consequences of the industry's restructuring. The study shows that despite the generally high level of education of the managerial personnel in Easter European steel, there is a shortage of managers able to run a company in a market environment. The training of such managers is one of the major human resource development issues for the industry. The report also notes that restructuring is a very costly exercise and, as practical experience shows, requires massive state aid.

3. OTHER INTERNATIONAL ORGANIZATIONS

3.1 World Bank

47. Publications issued by the World Bank since June 1993 containing issues related to iron ore, iron and steel were the following:

3.1.1 Market outlook for major primary commodities
Washington, February 1994. Restricted distribution.

48. This report is a compilation of studies that review the market prospects for energy and for metals and minerals commodities, including iron ore and iron and steel. It draws the attention to the fact that the forecasts presented are conditional on various macroeconomic and commodity specific assumptions, all of which are subject to great uncertainty. The macroeconomic scenario underpinning the forecasts is discussed in the World Bank's report, Global Economic Prospects and the Developing Countries, 1994.

3.1.2 Commodity markets and the developing countries
Washington, December 1993. Publication for sale.

49. This new quarterly review discusses recent developments in 34 primary commodity markets including iron ore and steel, and their likely impact on prices. Featured are production, consumption, and trade patterns to pinpoint why some commodities may thrive while others may falter. Each issue provides succinct, yet substantive, assessments on the current market climate for raw materials.

3.2 General Agreement on Tariffs and Trade (GATT)

50. The GATT secretariat has not published any specific study on iron ore, neither on iron or steel in 1993. Its annual report International Trade 1993 covers, however, the iron and steel sector. World exports of iron and steel are reported by destination for the years 1990-92. Imports (in value terms) of iron and steel of OECD regions and from seven non-OECD regions are given for the 1980-92 period. Furthermore, under the framework of the market-access negotiations of the Uruguay Round, iron and steel were included in the list of additional natural resource-based products. The objective was to liberalize trade in those products by reducing or eliminating tariffs, tariff escalation and non-tariff measures.

3.3 Organization for Economic Cooperation and Development (OECD)

51. The OECD, through its Steel Committee, publishes regularly two annual reports in the iron and steel field; the most recent ones are:

3.3.1 The Steel Market in 1993 and Outlook for 1994-1995
Sales No. ISBN 93-64-13930-3, Paris, 1994
Available in English and French.

52. This report provides an analysis of the steel market, pointing out the main features and market developments in 1993, as well as the outlook for 1994. It covers overall aspects related to steel supply, demand, trade and capacity, as

well as developments in the steel market by area for both OECD and non-OECD countries. It also contains brief analyses and data regarding employment in the steel industry for the OECD countries.

3.3.2 The Iron and Steel Industry in 1992
Sales No. ISBN 93-64-03713-6, Paris, 1994
Bilingual publication in English and French.

53. This annual publication is a statistical compendium presenting trends in the iron and steel industry for OECD countries and Mexico in 1991, containing 30 statistical tables showing steel production, consumption, trade data, as well as other indicators of activity such as employment levels, annual investment expenditures by sector and by country, export prices, domestic prices and indices for certain iron and steel products and related steelmaking raw materials such as iron ore, manganese ore, coke and ferrous scrap.

3.4 Commission of the European Union (EUC)

54. The Commission of the European Union did not publish any specific study on iron ore in 1993. However, the EU's programme for steel for the first half of 1994 briefly reviews market developments for the steel-related raw materials which include iron ore, coke and scrap.

55. The statistical office of the European Union, EUROSTAT, located in Luxembourg, publishes regularly detailed statistical information on iron and steel for its member countries. The publications are multi-language (seven languages) and can be purchased or obtained through subscription.

3.4.2 Iron and Steel Yearbook - 1993

56. This publication provides yearly statistics on the structure and the economic situation of the EU's iron and steel industry. It includes data on employment, size of enterprises, plants, crude steel, iron and scrap balances, production of iron ore, pig iron, crude steel and finished steel and products, consumption of raw materials, external trade in scrap, etc.

3.4.3 Iron and Steel Monthly - with Quarterly Supplement

57. This publication presents the European Coal and Steel Community (ECSC) steel situation at a glance, including a monthly index of production of the Community's iron and steel industry, pig iron production, production and trade of steel products, as well as consumption and receipts of scrap.

3.5 Common Fund for Commodities (CFC)

58. The Common Fund for Commodities started its operations as an international financial institution in 1989. It has a membership of 105 States plus the European Union. Under its second account, the Fund may make loans and grants for the financing of development measures in the field of commodities aimed at improving the structural conditions in markets and at enhancing the long-term competitiveness and prospects of particular commodities. One of its unique features is that it finances projects sponsored by International Commodity Bodies (ICBs) which are commodity-focused rather than country-focused.

59. Its Annual Report presents a general economic assessment of the ore minerals sector, but the Common Fund has never carried out any study or project related to iron ore and/or steel, for the reason that to-date, no International commodity Board (ICB) in this commodity sector has applied for designation to the Fund.

3.6 International Iron and Steel Institute (IISI)

60. The IISI is a non-governmental, non-profit research organization dealing with various aspects of the international steel industry, including its raw materials. IISI work is carried out through seven standing committees. More related to iron ore is the **Committee on Raw Materials** which has a membership composed of companies from 21 steel-producing countries. During its latest annual meeting held in June 1994, the Committee examined the short and medium-term trends in raw materials supply and demand. Following the publication of the report on World Cokemaking Capacity in 1993, the Committee is now working on a study on **Future supplies of iron ore**, scheduled to be published during the first half of 1995. At present, the IISI secretariat is collecting information on iron ore to asses the world existing mining capacity, preparation and handling facilities, and on envisaged closures, expansions or new mines to be opened until the year 2000. An interesting study recently published by IISI was:

3.6.1 Infrastructure projects and steel use
IISI, Brussels, 1993

61. This study covers a very important market for steel, which includes railways, roads, bridges, ports and other fixed assets. It recalls that governments in major industrial countries have been cutting infrastructure spending for almost two decades, and in some of them, investment in infrastructure has not caught up with rapid industrial development. The main problem is financing, since infrastructure has traditionally been financed through taxation and it is always difficult to raise taxes. The report calls for innovative means of financing, in order to make these investments more attractive to private initiative. It is felt that spending on steel-intensive infrastructure projects can not only improve economic efficiency and competitiveness, but also provide a boost to steel demand.

3.7 Latin American Iron and Steel Institute (ILAFA)

62. ILAFA remains the main institution to promote the iron and steel industry of Latin America. Among its activities a major event is the Annual Congress of the Latin American Iron and Steel Industry. In 1993, the Congress was held in Buenos Aires, Argentina, and in 1994 it is scheduled to take place from 20-23 October in Santiago, Chile. ILAFA also organizes technical seminars, undertakes studies and publishes regularly detailed statistics on the Latin American iron ore, iron and steel industry. In addition to Siderurgia Latinoamericana, its monthly technical review, ILAFA's most recent publications were:

3.7.1 The Latin American iron and steel industry in 1992/93 and its prospects
ILAFA, Santiago, 1993 Bilingual: Spanish and English

63. This annual study analyses the main world economic developments as well as the economic situation in each Latin American country, and its linkage with

the regional iron and steel industry and factors influencing the production, trade, investments and the overall world steel market situation.

3.7.2 Statistical yearbook of steelmaking and iron ore mining in Latin America - 1993, Santiago, May 1994 Bilingual: Spanish and English

64. This annual publication is also available on diskettes. The latest edition presents statistical series for the period 1988-1992 for Latin American countries on production, consumption, imports, exports and prices of steel and raw materials. It also provides data on employment and investments made by the Latin American iron and steel industry.

3.8 South-East Asia Iron and Steel Institute (SEASI)

65. SEASI is a professional technical institute representing the iron and steel industries in South East Asia. It was created in 1971 under the auspices of the United Nations Economic Commission for Asia and the Far East (ECAFE). SEASI organizes conferences, seminars and study tours in the region and also provides information services to its members. It publishes monthly newsletters, quarterly journals, and an annual directory. The proceedings and technical papers presented at conferences and seminars are also usually published. In 1994, the SEASI Annual Conference was held in May in Manila, Philippines, and focused on "Usage of scrap and alternate materials and/or processes to achieve competitive advantage in the iron and steel industry". Among SEASI's most recent publications were the following three manuals prepared by the SEASI Committee on Environmental Affairs which was set up with the financial support of UNIDO, with a view to implementing education and training programmes that will enable the iron and steel industries in South-East Asian countries to be proactive in their obligations to world environmental issues.

3.8.1 Manual on environmental measurement and evaluation
SEASI, Manilla, November 1993

66. The aim of this report was to quantitatively grasp the pollutants discharged by the iron and steel industry, in order to properly execute the environmental control. Methods of measuring pollutants mainly automatic measuring instruments, and formation of simulation models are explained.

3.8.2 Manual on fugitive dusts in iron and steel making plants
SEASI, Manilla, November 1993

67. This document presents an analysis of emerging sources of dust reduction, measurement and monitoring methods, and finally some principles for the inventory of fugitive dust in steel works. Due to progress in technology and management, fugitive dust generation in most steel works has been reduced to a minimum, helping to improve the old image of the dusty steel works.

3.8.3 Manual on electric arc furnace dust collecting
SEASI, Manilla, November 1993

68. This manual was intended to review the existing dust control technologies of the EAF plants. It mainly contains methods for the minimisation, collection

and treatment of dust emerging from EAF, since to overcome this problem is a high priority in all countries in the region.

3.8.4 SEASI Steel Statistical Yearbook - 1992
SEASI, Manilla, October 1993

69. This was the second edition of this publication, which will became regular. It presents detailed statistics for 1991 and 1992 of steel production, consumption, and trade by products for the SEASI's ten member countries.

3.9 Arab Iron and Steel Union (AISU)

70. AISU's main objective is to facilitate close and effective cooperation between its member countries with a view to furthering the development of the iron and steel industry in the Arab countries. To this end, AISU organizes congresses and seminars on technical steel issues. The forthcoming event is the "International symposium on flat steel products technology" scheduled to take place from 23-25 October 1994, in Cairo, Egypt, with a view to focus on the advanced technology production of flat products, which is gaining increasing attention in the Arab world. The AISU publishes a monthly review, Arab Steel, with technical papers from the various seminars and other relevant articles. Its documentation center also issues a monthly Steel information service, summarizing world steel news for its members.

3.10 Arab Industrial Development and Mining Organization - (AIDMO)

71. This organization represents a new structure which merges the former Arab Industrial Development Organization (AIDO), the Arab Organization for Standardization and Methodology (ASMO), and the Arab Organization for Mineral Resources (AOMR). In 1993 and so far in 1994, no study or activities on iron ore were carried out by this new institution.

3.11 African Iron and Steel Association (AISA)

72. The African Iron and Steel Association, set-up in 1991, is expected to contribute to the implementation of the "Industrial Decade for Development in Africa" and the "Priority Programme for African Economic Revival" guided by the Lagos plan of action. Its membership is composed of government and industry representatives from Algeria, Angola, Congo, Ethiopia, Ghana, Mali, Mauritania, Nigeria, Senegal, Togo, Tunisia, Zambia and Zimbabwe. The headquarters of AISA is in Nigeria, where the first General Assembly held in 1992 elected its Secretary-General.

3.12 American Iron Ore Association (AIOA)

73. This Association, which represents the iron ore industry of Canada and the United States, does not publish studies or articles on iron ore. However, the AIOA issues a comprehensive collection of detailed iron ore statistics of the iron ore industry in Canada and the United States. The most recent issue in this series is: Iron Ore 1993, Ohio, United States, July, 1994.

Part II

RELEVANT STUDIES AND PUBLICATIONS COMMUNICATED BY GOVERNMENTS

Brunei Darussalam

74. The Ministry of Development of Brunei provided a series of six publications with standard specification in accordance to the current needs of the local building industry and the British Standard for the following steel products: - steel fabric for the reinforcement of concrete; carbon steel bars for the reinforcement of concrete; specification for scheduling, dimensioning, bending, and cutting of steel reinforcement for concrete: cold reduced steel wire for the reinforcement of concrete; arc welding of carbon and carbon manganese steels; and quality systems for production and installation.

Egypt

75. The Egyptian Society for Engineering and Metallurgical Industries informed the UNCTAD secretariat about the conference on "Egyptian steel industry - impact on market economy" held in Cairo, from 15 to 17 November 1993. The main objective of the conference was to assess new, local and international developments in the steel industry and the impact of free market policies for the sector. Over 200 experts participated in the conference, and among the recommendations made the State was requested to provide all facilities to the public sector for the establishment of steel projects particularly in new industrial areas. The conference also recommended the adoption of incentives for investment in such important heavy industries which have direct and evident impact on the growth of national production and income.

Gabon

76. The Ministry of Mines, Energy and Water Resources informed the UNCTAD secretariat that despite its large iron ore reserves (more than 800 million tons), Gabon is not yet an iron ore producing country, nor a consumer. The most recent studies on iron ore were carried out in 1986, and have already been sent to UNCTAD at that time.

Indonesia

77. The Directorate for Mining Industries Development provided abstracts of the following studies: (i) investigation of iron sand pellet making from Jogiakarta conducted in 1983/84; (ii) the studies of pig iron or steel conducted by PT Aneka Tambang up to year 1994; and (iii) sources for PT Krakatau Steel ironmaking. It also pointed out that Indonesia only produces iron sand for cement factory consumption, with annual production in 1992 and 1993 being around 300 to 350 thousand tons.

Mali

78. The Ministry of Mines, Industry and Water Resources informed the UNCTAD secretariat that over the last two years no supplementary study on iron ore or on issues relating to the iron and steel industry, were carried out in Mali. It was recalled however, that Mali had a great potential on iron ore, particularly

in the western part of the country. The main deposits are: (i) Bale with probable reserves of about 146 million tons with Fe content ranging between 50-60%, 5% silica, 3% alumina and 0,03% phosphorous; (ii) Diamou bodies with reserves of 150 million tons of ores with 32%Fe; (iii) Djidian Kenieba with reserves of some million tons with 40%Fe. Attention was also drawn to the existing energy resources in a distance of about 60Km of the reserves, as well as the existing railway transport link which would facilitate the exploitation of these reserves and the installation of a iron and steel industry, if Mali could benefit from technical and financial assistance.

Malawi

79. The government of the Republic of Malawi informed the UNCTAD secretariat that his country has some reserves of iron ore at Mindale Hill and at Dzanze Mountain in Ntcheu. The United Nations Economic Commission for Africa is currently carrying out a feasibility study of Malawi's Iron Development. The study started in March and is expected to be concluded in December 1994.

Sudan

80. A copy of a recent study giving account of iron ore deposits in Sudan was provided by the Geological Research Authority of this country. Iron ore deposits are found in different parts of the country, but those of importance lie in eastern, central and western Sudan: Sufaya deposits have total reserves of 12 million tons with 40 to 56%Fe, mostly magnetite ores; Karora deposits consist essentially of magnetite with total reserves of 6.5 million tons with 48%Fe; Abu tuly deposit is preliminary evaluated at 35 million tons of reserves, mostly hematite with 61%Fe and very little amount of phosphorous and sulphur which are harmful ingredients in iron. Finally, the geological prospection for the Karnoy deposits indicate ores with 60%Fe, even if no detailed geological studies have been undertaken, surface estimation of reserves gave a preliminary figure of about 1 billion tons.

United States of America

81. The United States Department of the Interior - Bureau of Mines, published its Iron ore - Annual Report in October 1993. It reviews iron ore developments in the United States, including its geology resources, industry structure, legislation, etc. This study also presents a detailed analysis of the major factors influencing the world iron ore market in 1992.

82. The U.S. Bureau of Mines published recently Volume III of its Minerals Yearbook presenting the performance of the worldwide minerals and materials industry during 1992. It contains mineral data on more than 175 countries and discusses the importance of minerals to the economies of these nations. The reports incorporate location maps, industry structure tables, and an outlook section. This new edition is presented as follows:

- Mineral industries of Africa, international review
- Mineral industries of Asia and the Pacific, international review
- Mineral industries of the Middle East, international review
- Mineral industries of Latin America and Canada, international review
- Mineral industries of Europe and Central Eurasia, international review

Venezuela

83. The Ministry of Energy and Mines provided a copy of the following recent and relevant studies :

-"Report on iron ore prices for the European and Japanese markets in 1993" This report makes a comparative analyses of 1993 iron ore prices settled by producers and consumers for the European and Japanese markets for all types of ores. It also reviews the evolution of iron ore prices over the last few years, concluding that against all expectations iron ore prices declined by two digits in 1993, seriously affecting the expansion plans of major iron ore producers.

- "Venezuelan iron ore production in 1993".
This paper presents an analytical summary of iron ore developments in Venezuela, providing detailed mining monthly data by deposits and products, as well as a set of comprehensive iron ore statistics.

- "Results of the iron ore industry in Venezuela in 1993".
This article reviews the activities, in particular the economic-financial position of the Venezuelan iron ore industry, performed by the State company C.V.G.-Ferrominera Orinoco, responsible for the exploration, exploitation and commercialization of all iron ore in the country.

Part III

SUMMARIES ON SPECIFIC TOPICS

A. Iron ore mining capacity and investments

84. **UNCTAD**'s report "Review of the current market situation and outlook for iron ore - 1994" notes that despite the erosion of earnings due to the drop of iron ore prices, the iron ore industry has generally maintained investment decisions. Most companies reduced exploration expenditures and focused on cost reduction, new mining techniques and product quality. However, no new greenfield project took off in 1933. Capacity expansions were underway where infrastructure and market channels already existed, reinforcing the position of major companies. Incremental projects are in execution in Australia, Brazil, Chile, China, India, Sweden and Venezuela. After replacements, these projects may bring some 20 million tons of additional supply capacity within the next few years.

85. As regards world pelletizing capacity, the most recent information based on the annual survey carried out by the **U.S Bureau of Mines** for 1992, shows increases in Brazil, China, India and Sweden. With a total of 82 plants, world pelletizing capacity is estimated at 271.5 million tons (table 1).

B. Mining and environment

86. An international conference on "Development, Environment and Mining" organized jointly by UNCTAD, UNEP, the World Bank and the International Council on Metals and the Environment (ICME) was held in Washington D.C., USA in June 1994. The conference was chaired by the Minister of Environment and the Amazon of Brazil, and brought together over 300 participants from 56 countries. The topics discussed were: the management of mineral economies; public and private sector roles; government roles in environmental protection; mining and the community; investment and taxation; information needs for resource decisions; environmental liability and site rehabilitation, and environmental management in industry. As an outcome of the conference important policy issues were identified:

- Mineral resources can generate substantial wealth and be a powerful catalyst for economic development. They can also be problematic, however, particularly for low-income countries with a high concentration of mineral exports. Large mineral export earnings could lead to exchange rate appreciation which may weaken other sectors, resulting eventually in slower growth. The challenge for mineral economies is to establish an appropriate administrative, fiscal and regulatory framework; and to pursue a balanced and flexible macro-economic policy.

- The role of government in mineral-rich countries should not be to own or operate mining enterprises but to create an enabling environment that allows companies to be internationally competitive.

- Approaches taken by governments to environmental policies for the mining industry had shifted away from centralized decision-making,

detailed regulations and command-and-control approaches, towards the setting of objectives, clear standards and the provision of information.

- Strong environment regulations did not act as a disincentive to investment, provided that the regulations were transparent, equitable and stable.

- Community issues had been increasingly highlighted over the last decade in the context of sustainable development. Mining companies should respond to the development needs of countries and develop approaches that take into account local traditions and values.

- The objective of rehabilitation of mine sites should be to restore them as much as possible to the state they were in before exploitation started. There was a need for mechanisms that assure the availability of funds to finance rehabilitation.

- The lack of basic geological and mineral resource data is a fundamental constraint on national development. Intergovernmental organizations should support the strengthening of institutions and human resources for the generation, collection and open distribution of basic geological data and for the use of resource assessments in development planning.

Table 1
Iron ore: World pelletizing capacity, by continent and country

	Number			Rate capacity (million metric tons) gross weight)
	Sites	Plants	Units	
North America:				
Canada	5	6	13	26.44
Mexico	5	6	6	9.50
United States	10	18	50	66.55
Total	**20**	**30**	**69**	**102.49**
South America:				
Argentina	1	1	4	1.00
Brazil	3	8	8	25.00
Chile	1	1	1	4.20
Peru	1	2	2	3.20
Venezuela	1	1	2	6.60
Total	**7**	**13**	**17**	**40.00**
Europe:				
Belgium-Luxembourg	1	1	1	.80
Czechoslovakia	1	1	1	.25
Netherlands	1	1	1	3.80
Norway	2	3	3	1.20
Sweden	3	3	4	10.80
Turkey	1	1	1	1.30
USSR (former)	7	13	NA	80.00
Yugoslavia (former)	1	1	1	.60
Total	**17**	**24**	**NA**	**100.75**
Africa:				
Liberia	1	1	1	3.00
Morocco	1	1	1	.85
Nigeria	1	1	1	1.45
South Africa	1	1	1	.60
Total	**4**	**4**	**4**	**5.90**
Asia:				
Bahrain	1	1	1	4.00
China	4	4	NA	4.50
India	1	1	1	3.00
Iran (Islamic Rep. of)	1	1	1	2.50
Japan	1	2	2	4.40
Total	**8**	**9**	**NA**	**18.40**
Oceania:				
Australia	2	2	6	4.00
WORLD TOTAL	**58**	**82**	**NA**	**271.54**

NA = Not available
Source: Annual Report 1992 - Iron Ore, US Bureau of Mines, 1993.

Annex

DIRECTORY OF RELEVANT INTERNATIONAL ORGANIZATIONS

For inquiries and acquisition of the publications listed in thi bibliography, please contact directly the appropriate organization:

* UNCTAD
Palais des Nations
1211 Geneva 10
Switzerland
Tel: (4122)9071234/9171234
Telex: 412962 - UNATIONS
Fax: (4122) 907-0057

* UN ECONOMIC COMMISSION FOR EUROPE - ECE
Palais des Nations
1211 Geneva 10
Switzerland
Tel: (4122)9071234/9171234
Telex: 412962 - UNATIONS
Fax: (4122) 917-0123

* UN ECONOMIC COMMISSION FOR AFRICA - ECA
Africa Hall - P.O. Box 3001
Addis Ababa
Ethiopia
Tel: 447000/447200
Cable:ECA, Addis Ababa
Fax: (2511) 514416

* UN ECONOMIC COMMISSION FOR ASIA AND THE PACIFIC - ESCAP
The United Nations Building
Rajadamnern Av.
Bangkok 10200
Thailand
Tel: 2829161-200
2829381-389
Telex: 82392 ESCAP
Cable: ESCAP

* UN ECONOMIC COMMISSION FOR LATIN AMERICA AND THE CARIBBEAN - ECLAC
Casilla 79 D
Santiago
Chile
Tel: 48-5051
Telex: 340295/441054
Cable: UNATIONS

* UNITED NATIONS
Division of Natural Resources
United Nations
N.Y. 10017
U.S.A.
Tel: 212-963-8792
Cable: UNATIONS, NEW YORK

* UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION - UNIDO
Vienna International Center
P.O. Box 300
A-1400, Vienna
Austria
Tel: 211-310
Telex:135612
Fax: 232156

INTERNATIONAL LABOUR OFFICE - ILO
4, route des Morillons
CH-1211 Geneva 22
Switzerland
Tel: 22-7996111
Telex: 415647
Fax: 22-798-8685

---

* United Nations publications may be obtained from bookstores an distributors throughout the world. Consult your bookstore or write to United Nations, Sales or Distribution Section, New York or Geneva.

THE WORLD BANK
1818 H Street, N.W.
Washington, DC 20433
U.S.A.

Tel: 202-477-1234
Telex: WUI 64145
RCA 248 423

GATT
Center William Rappard
1211 Geneva 21
Switzerland

Tel: 739-5111
Telex: 412324 GATT
Fax: 022-7314206

ORGANIZATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT- OECD
2, rue André-Pascal
75775 Paris Cedex 16
France

Tel: 45.248200
Telex: 620160
Fax: (33-1) 45248500

COMMISSION OF THE EUROPEAN UNION - CEU
Rue de la Loi 200
B-1049 Brussels
Belgium

Tel: 295-1111
Telex: B21877
Cable: COMEUR Brussels

COMMON FUND FOR COMMODITIES
Willemshuis, Stadhouderskade 55
1072 AB Amsterdam
The Netherlands

Tel: (3120) 66 46409
Telex: 12331 cfc nl
Fax: (3120) 67 60231

INTERNATIONAL IRON & STEEL INSTITUTE - IISI
Rue Col. Bourg, 120
B-1140 Brussels
Belgium

Tel: 735-9075
Telex: 22639
Fax: 735.8012

LATIN AMERICA IRON & STEEL INSTITUTE - ILAFA
Casilla 16065
Santiago 9
Chile

Tel: 22.37581
Telex: 340348
Fax: (56-2)2253111

SOUTH EAST ASIA IRON & STEEL INSTITUTE - SEASI
P.O. Box 7094
40702 Shah Alam
Selanga Darul Ehsan
Malaysia

Tel: (603) 559 1102
Telex:
Fax: (603) 559 1159

ARAB IRON & STEEL UNION - AISU
P.O. Box 4
Cherage - Algiers
Algeria

Tel: 36-2704/06
Telex: 63158
Fax: 37.1975

AMERICAN IRON ORE ASSOCIATION - AIOA
614 Superior Av., N.W.
915 Rockefeller Building
Cleveland, Ohio 44113-1306
U.S.A.

Tel: (216)241-8261
Fax: (216)241-8262